

MODIFIED MCrAlY COATINGS ON TURBINE BLADE TIPS WITH IMPROVED DURABILITY

ABSTRACT OF THE DISCLOSURE

There is provided a method for depositing a modified MCrAlY coating on a turbine blade tip. The method utilizes laser deposition techniques to provide a metallurgical bond between a turbine blade substrate, such as a superalloy substrate, and the modified MCrAlY composition. Further the modified MCrAlY coating has sufficient thickness such that a post-welding grinding operation to size the turbine blade to a desired dimension will not remove the modified MCrAlY coating entirely. The modified MCrAlY coating thus remains on the finished turbine blade tip after grinding.